

Little River
Water Quality Implementation Plan
**(fecal bacteria, sediment, and
temperature)**

May 3, 2011



Acknowledgements

Steering Committee Members

Working Group Members

Skyline Soil & Water Conservation District

VADEQ, NRCS, VCE, VDH and VADCR

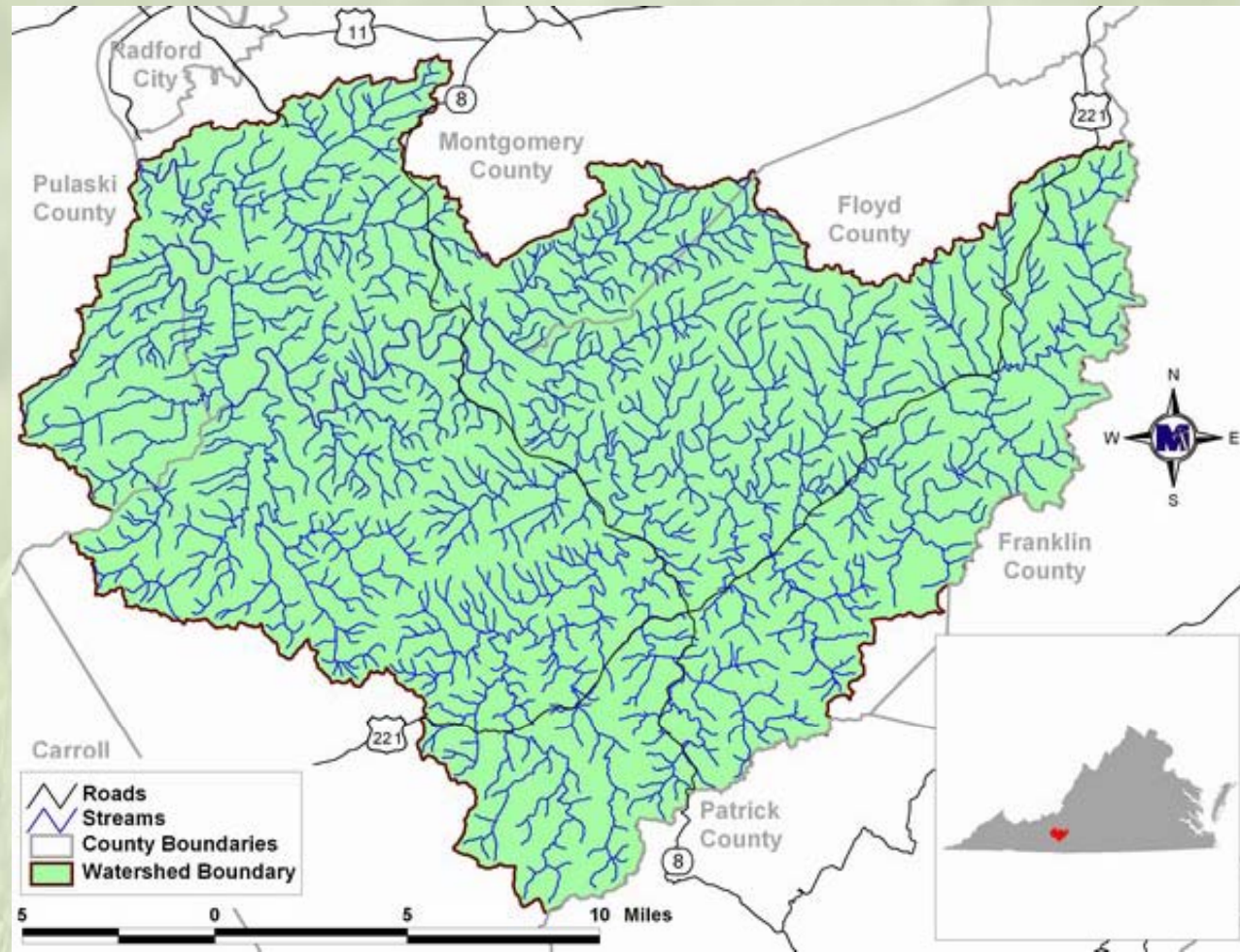
Presentation Outline

1. Little River TMDL Summaries
2. Public Participation
3. Implementation Actions
4. Cost/Benefit Analysis
5. Goals & Milestones
6. Next Steps



Little River watershed

- ~ 225,000 acres
- Forest ~ 57%
- Pasture/Hay ~ 37%
- Cropland <1%
- Developed ~ 4%
- (contains Town of Floyd)



Little River TMDL: Fecal Bacteria

- All straight pipes must be corrected
- 73% of livestock need to be fenced out of streams



Little River TMDL: Sediment

- 18% reduction in sediment runoff from pasture, disturbed forest, cropland and transitional lands
- 18% Reduction in sediment load from channel erosion



Little River TMDL: Temperature

- Plant approximately 56 miles of forested riparian buffer around the impaired temperature segments



TMDL Implementation Plan

Document that details actions or strategies that must be undertaken to achieve load reductions as defined by the TMDL.

Public Participation

- **Public Meetings (2)**
- **Working Groups**
 - Residential (1)
 - Agricultural (1)
- **Steering Committee**



Public Participation

Comment

- Implementation needs to be locally driven
- ---

Add management practices to address
 - stormwater
 - failing septic systems
 - stream restoration
 - livestock waste management
 - relocation of concentrated feeding areas
- ---

A source of information on proper streamside plantings is needed.

Response(s)

- The local SWCD will have responsibility for implementing the plan
- A local group can be formed to promote participation in implementation efforts. Possibly reviving the Little River Watershed Association.
- ---

These practices have been added to the plan.
- ---

A shelf at the library should be set aside for water quality information.

Public Participation

Comment

- BMP incentive programs need to be more flexible.
-
- Water Quality monitoring needs
 - track the results of implementation
 - spatially intensive monitoring may help to point out specific areas of concern.
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Response(s)

- A statement to this effect is included in the document.
 - Flexibility in State incentive programs has increased over time.
 - Alternative funding sources should be sought.
-
- A monitoring plan that encourages volunteer monitoring in addition to VADEQ monitoring has been included in the document.
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Implementation Actions: *Agricultural BMPs*

● Livestock Exclusion

- 1,081 Livestock Exclusion with Riparian Buffers for TMDL Implementation (LE-1T)
- 25 Stream Protection Systems (WP-2T)
- 1.1 million ft of Streamside Fencing Maintenance

● Land-Based BMPs

- 3,670 acres of Improved Pasture Management
- 18 acres of Conservation Tillage

Implementation Actions:

Residential BMPs

- 26 Sewer Connections (RB-2)
- 316 Septic System Installation/Replacement (RB-4)
- 18 Alternative Waste Treatment System (RB-5)
- 30 acres of Erosion and Sediment Control

Implementation Actions:

Other BMPs

- Reforestation of 270 acres of Disturbed Forest
- Implementing 27 acres of Forest Harvesting BMPs
- 15,000 ft of Streambank Stabilization
- 297,000 ft of Forested Riparian Buffer

Implementation Actions:

Technical Assistance (staffing)

- Agricultural Program
 - Years 1 to 10
 - ✦ Skyline SWCD
 - ✦ 1 Full-Time Employee (FTE)
- Residential Program
 - Years 1 to 10
 - ✦ Skyline SWCD
 - ✦ 1 Full-Time Employee (FTE),
- Technical assistance from NRCS and VDH



Staged Implementation

What is Staged Implementation?

- Stage I:
 - A period of five years (2011 to 2016) where the more cost-effective BMPs are installed
 - Could potentially result in de-listing of the Little River and tributaries from the impaired waters list
- Stage II:
 - A period of five additional years (2016 to 2021) that follows Stage I
 - Stage II contains all additional BMPs needed to meet the full bacteria, sediment, and temperature load reductions called for in the TMDL allocation
 - Continued monitoring and maintaining achieved progress
- Stage III: Meet water quality standards by January 2026

Implementation Costs

Control Measures	Stage I	Stage II cost
Livestock Exclusion Practices	\$20,582,419	\$2,979,504
Land-Based Ag. Practices	\$151,800	\$125,250
Residential Sewage Treatment	\$3,044,000	\$0
Land-Based Erosion and Sediment Control	\$220,000	\$191,000
Streambank Stabilization	\$532,500	\$532,500
Forested Riparian Buffer	\$148,500	\$148,500

Estimated Funding Needs

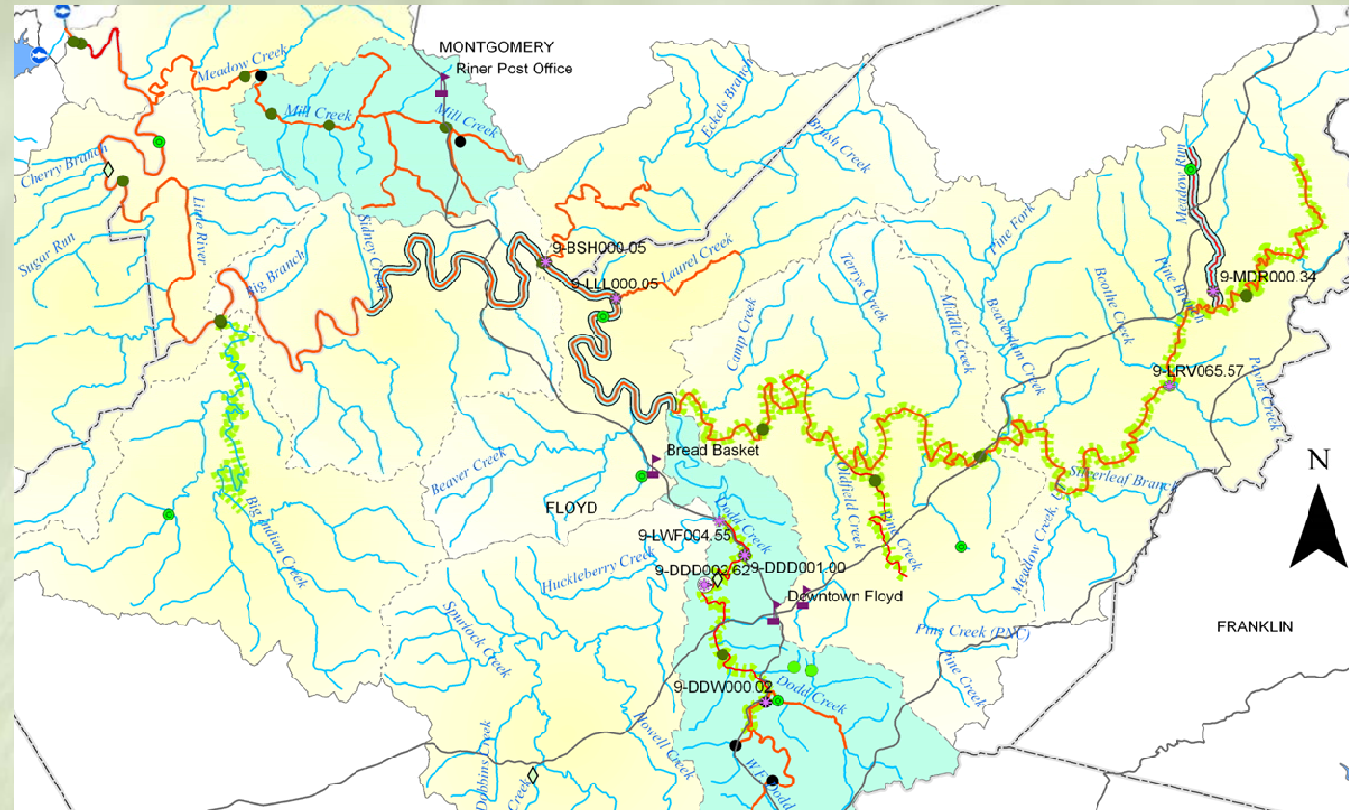
Stage	Agricultural BMPs (\$)	Residential BMPs (\$)	Other BMPs (\$)	Tech. Assist. (\$)	Total (\$)
Stage I	20.7M	3.1M	0.8M	0.55M	25.2M
Stage II	3.1M	0.0M	0.9M	0.55M	4.55M
Total	23.8M	3.1M	1.7M	1.1M	29.7M

Funding Sources

- Range of potential funding sources available
 - Virginia Ag. BMP Cost-Share Program
 - Virginia Ag. BMP Tax Credit Program
 - USDA - EQIP
 - USDA - CREP
 - Virginia Water Quality Improvement Fund
 - Virginia Revolving Loan Programs
 - Others

Monitoring Plan

- Monitoring to gage progress and identify areas of concern is needed
- VADEQ monitoring will continue
- Volunteer monitoring is encouraged



Benefits

- Water Quality Benefits
 - Human Health
 - Environmental Benefit



- Economic Benefit
 - Agricultural Producers
 - Homeowners
 - Local Community

Stakeholder's Role in Implementation

Participation

- Town of Floyd, VA and Floyd, Montgomery, and Pulaski counties residents
- Skyline Soil & Water Conservation District
- County Governments
- Town of Floyd Government
- VA Department of Conservation and Recreation
- VA Department of Environmental Quality
- VA Department of Health
- VA Cooperative Extension
- USDA – Natural Resources Conservation Service

Next Steps

- 30-day comment period (ends 6/6/2011)
 - Copy of plan will be at www.deq.state.va.us/tmdl/
- Implementation plan approved Virginia State Water Control Board
- Skyline SWCD continues to provide technical and financial assistance to watershed residents
- Steering Committee evaluates progress

Contact Information

- DEQ

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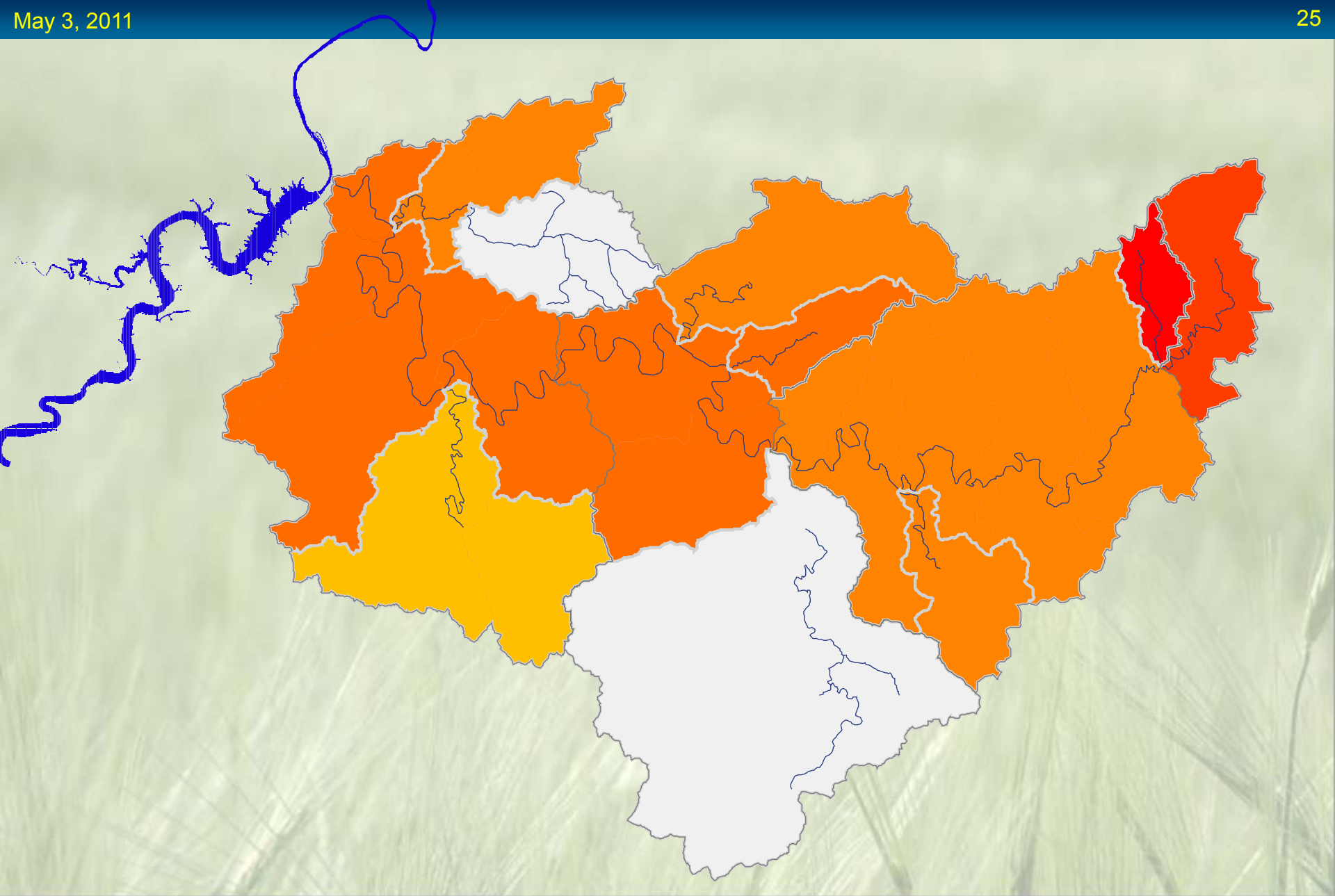
*Send Comments by
6/6/2011*

- MapTech

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Implementation Ranking

<u>Impairment</u>	<u>Overall Score</u>
Meadow Run	8.8
Little River Headwaters	6.5
Laurel Creek	6.1
Little River - Benthic	5.8
Little River - Entire	5.6
Meadow Creek	5.1
Brush Creek	5.1
Pine Creek	4.9
Little River - Above Dodd	4.6
Big Indian	2.6

